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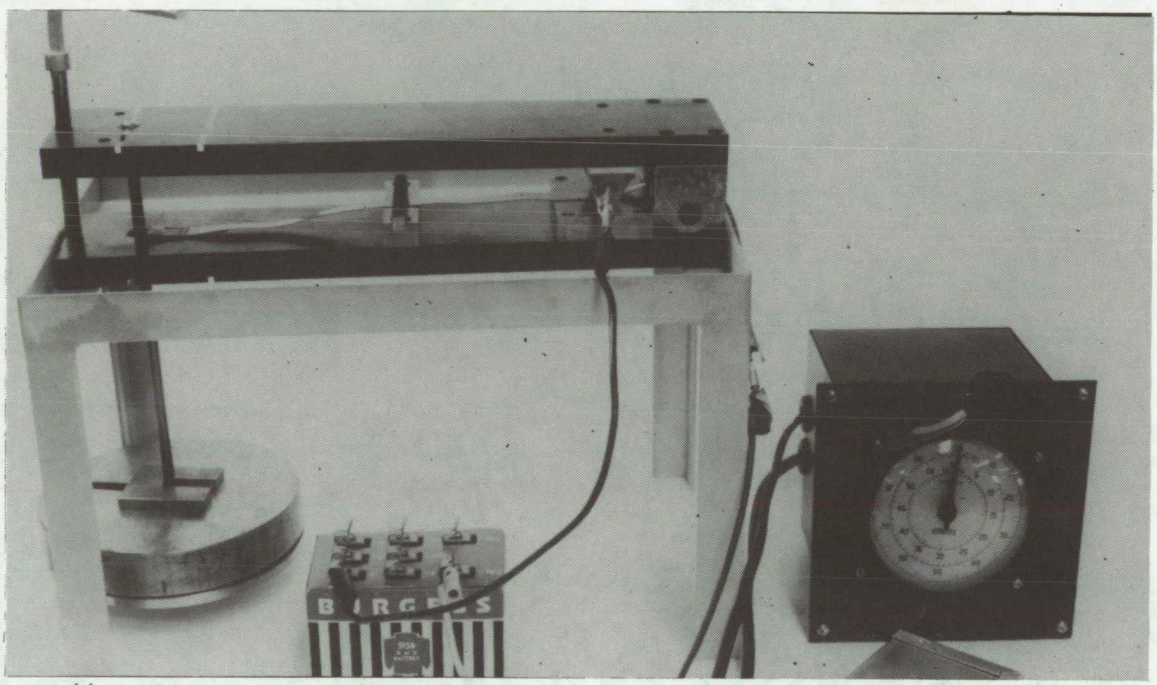
NASA TECH BRIEF

Marshall Space Flight Center

Cable Insulation Cut-Through Tester



A portable tester measures the weight load required to cut through the various types of insulation on either shielded or unshielded round wires and flat conductor cables. Tests can be performed at ambient conditions or in an environmental chamber. The device can accurately measure the cut-through load within a specified time or the time when cut-through occurs at a specified load.

The cable specimen (up to 1 in. wide) is placed on an anvil beneath a knife edge supported on a fulcrum. The knife edge lever is loaded with weights placed in a holder. The fulcrum is located to give a 6 to 1 leverage ratio. Prior to the start of a test, a weight adjustment screw is turned clockwise until mechanical resistance is encountered. One lead from the counter is connected to the conductors of the cable specimen. The counter will indicate the time, to within 0.1 sec, required for the straight edge to cut through the insulation and make contact with the conductors.

Note:

Requests for further information may be directed to:

Technology Utilization Officer
Code A&TS-TU
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Patent status:

No patent action is contemplated by NASA.

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